

FIG.1A

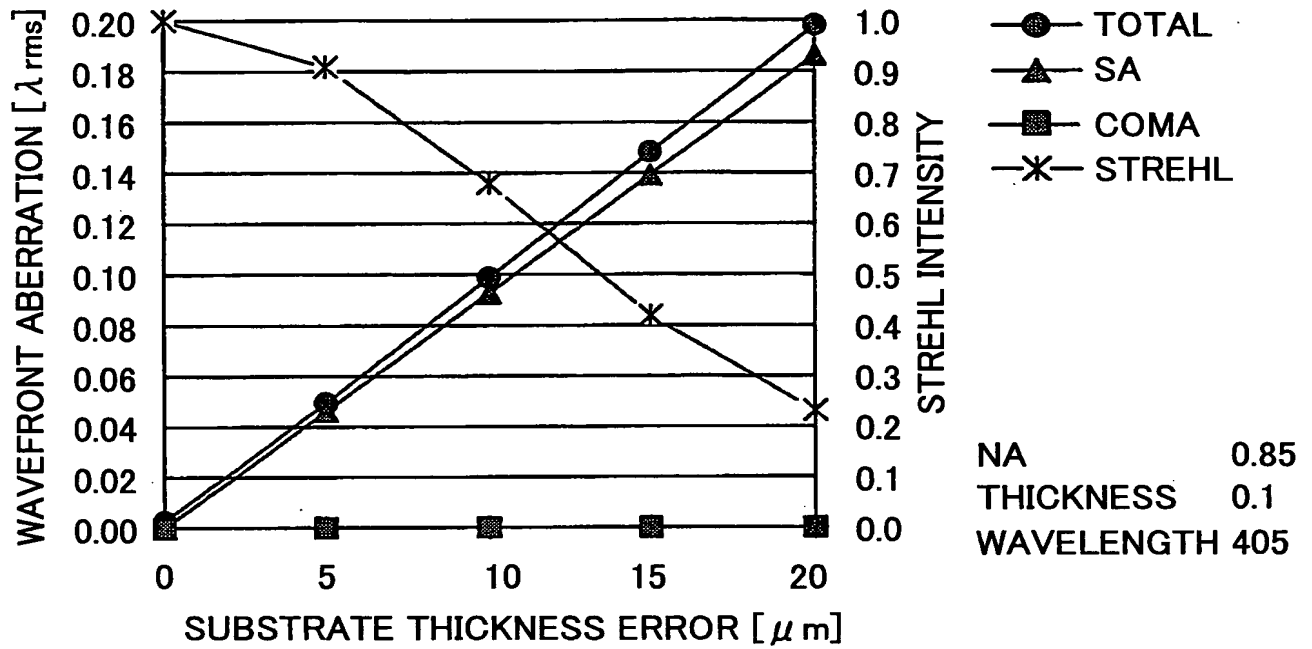


FIG.1B

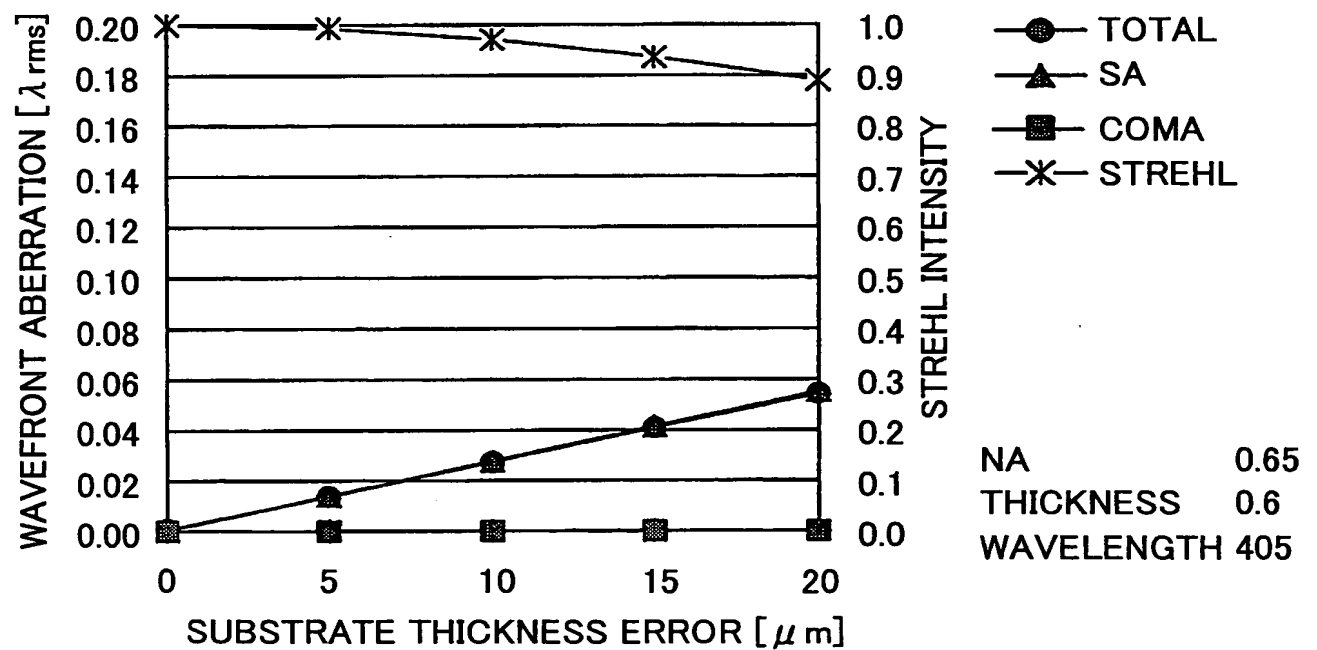


FIG.2A

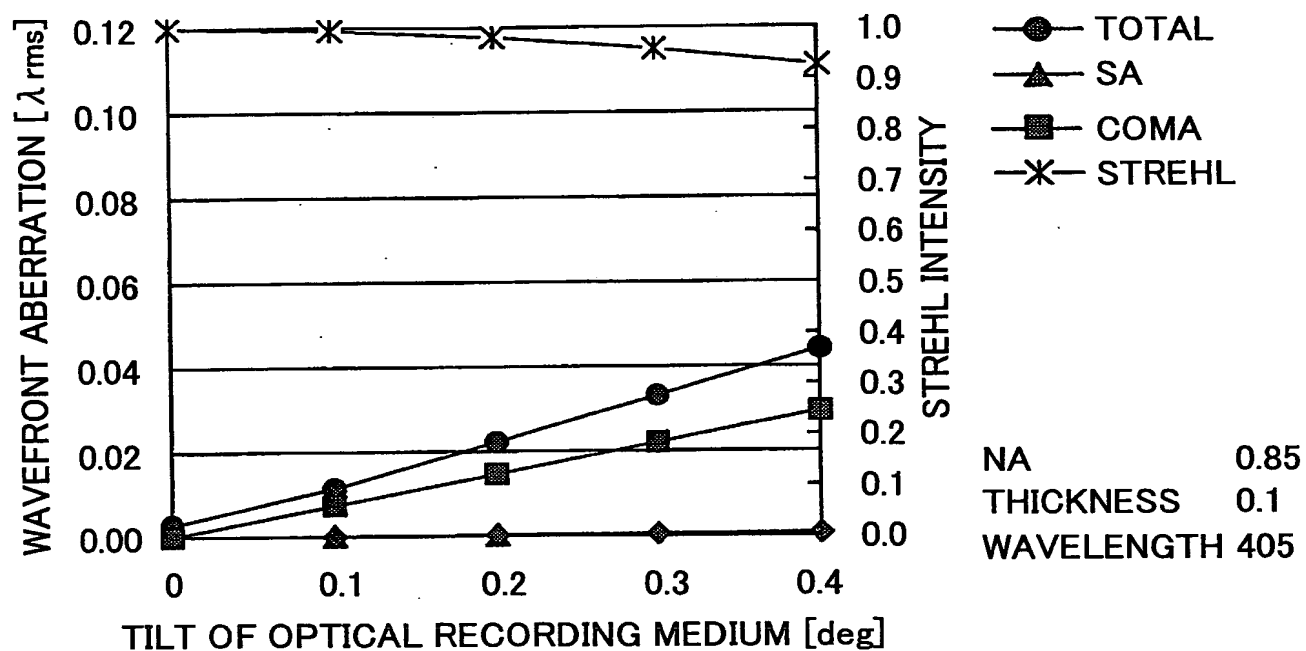


FIG.2B

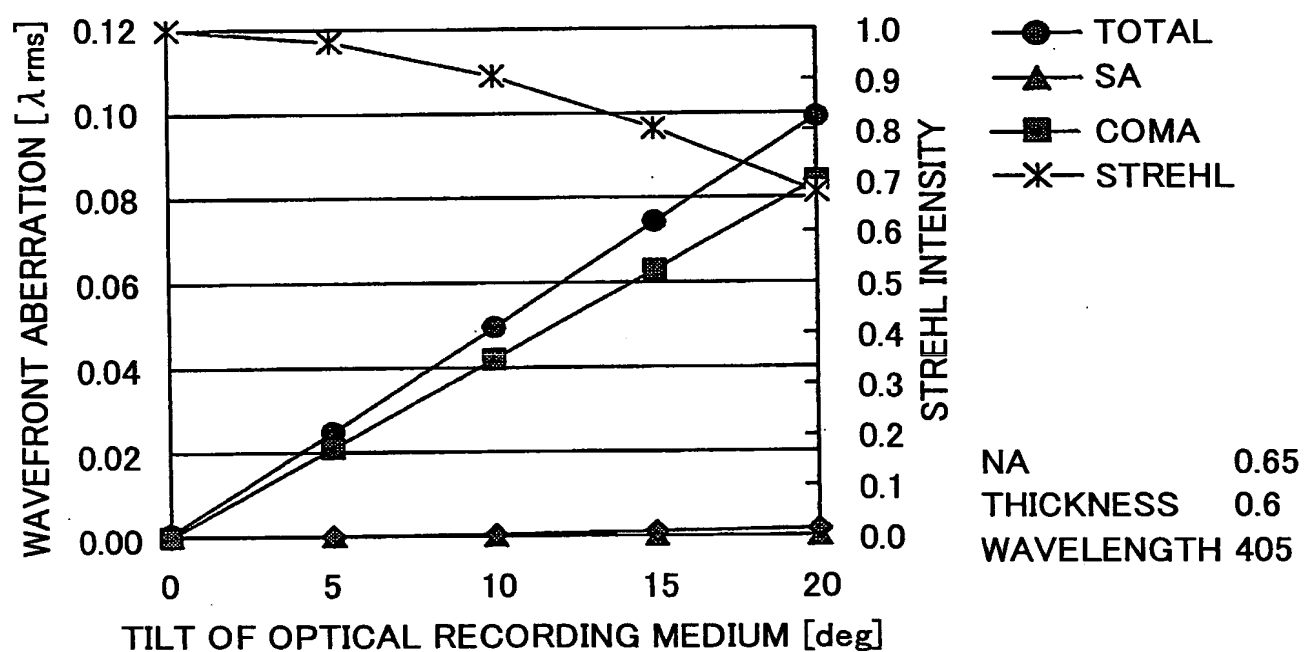


FIG.3

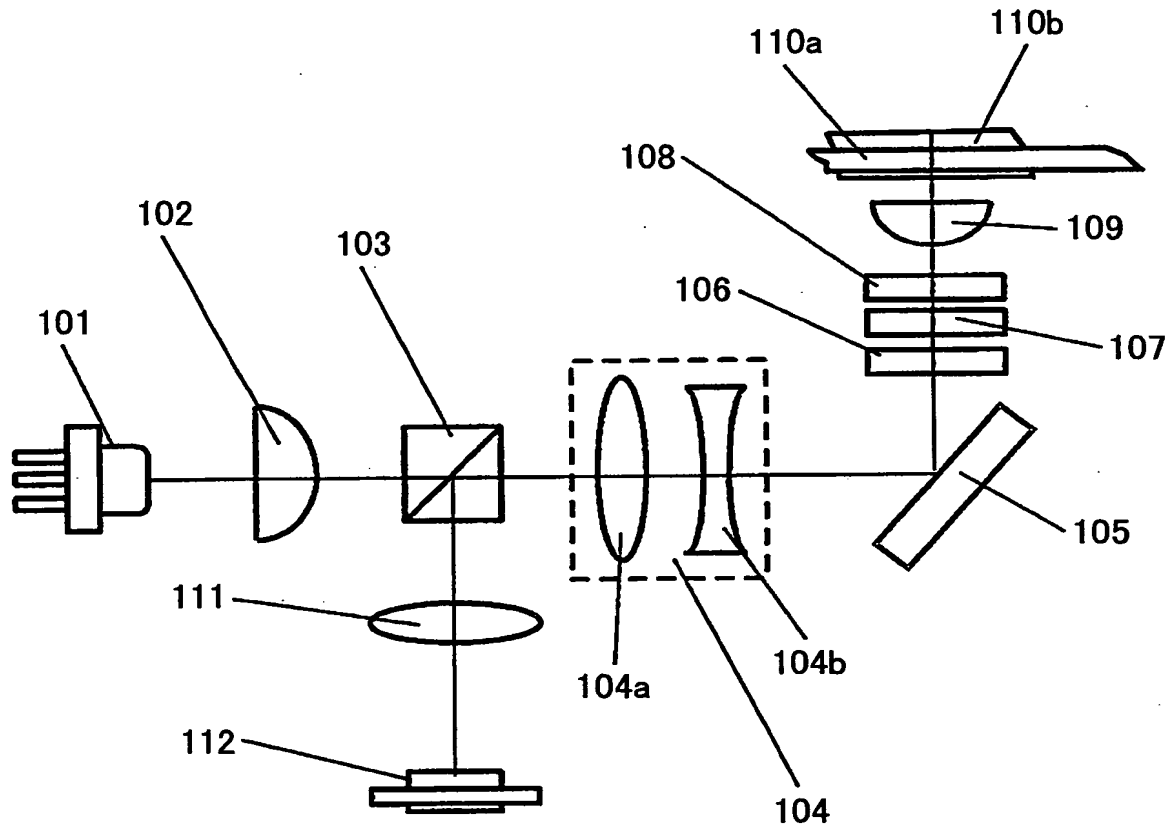


FIG.4

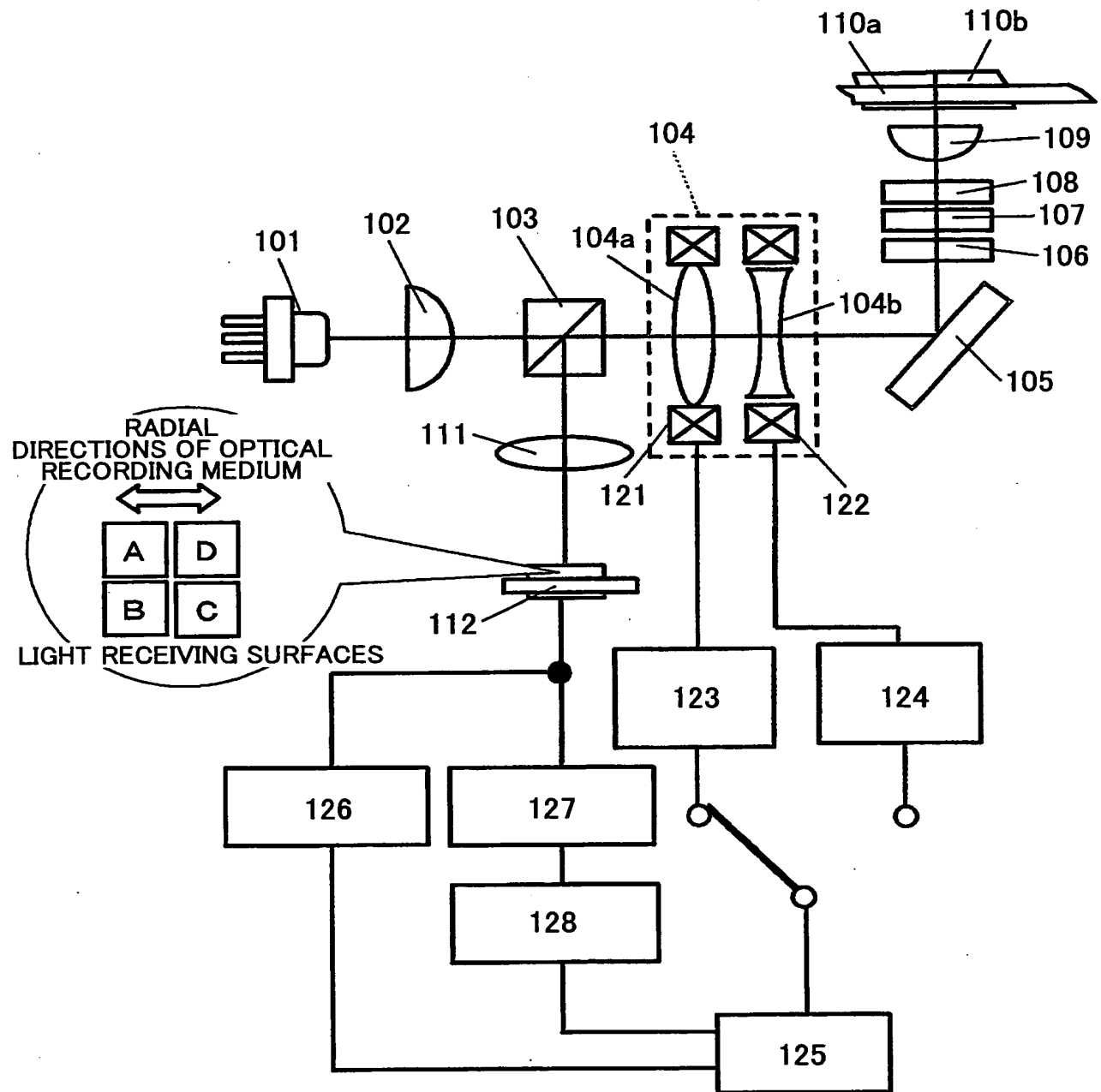


FIG.5

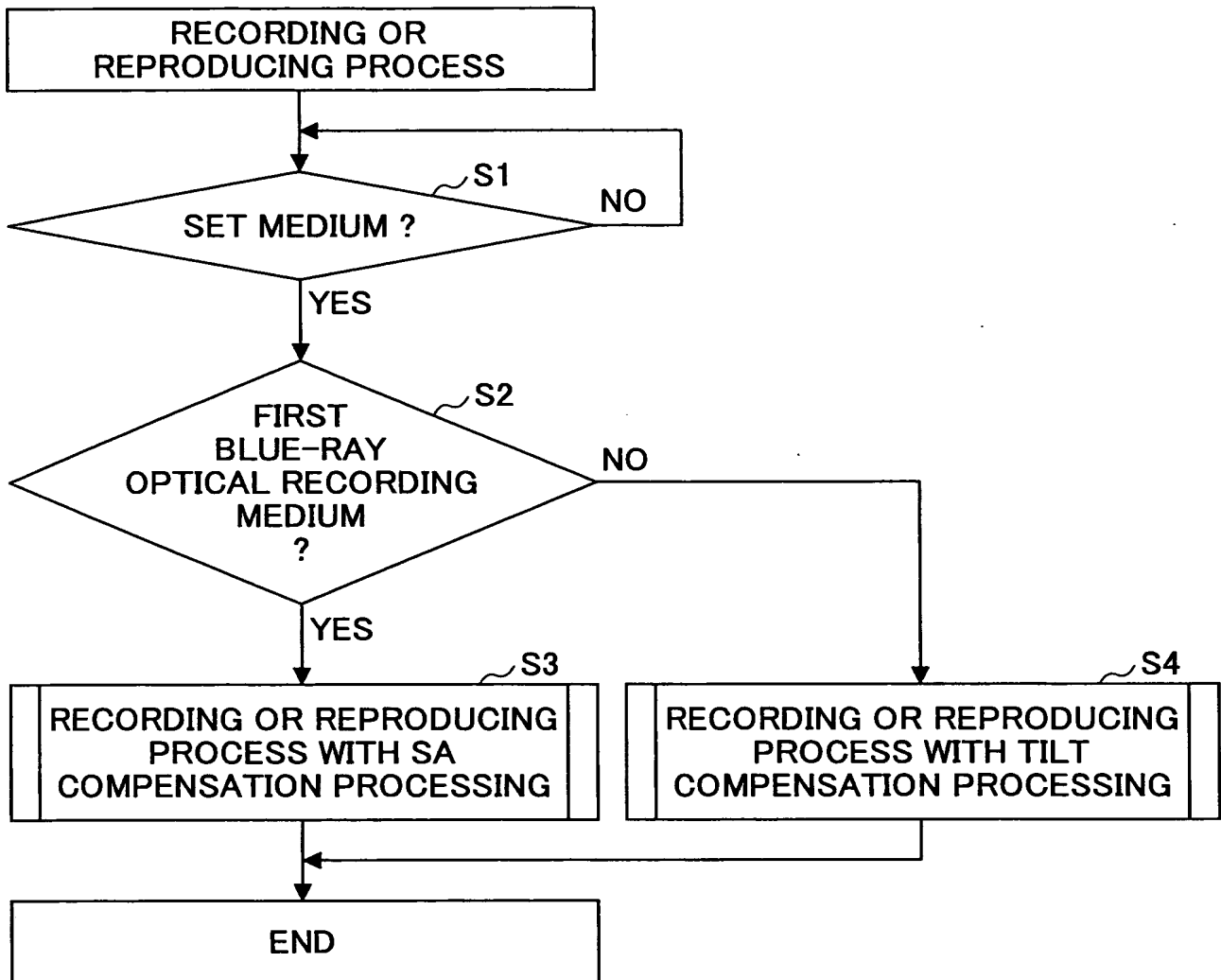
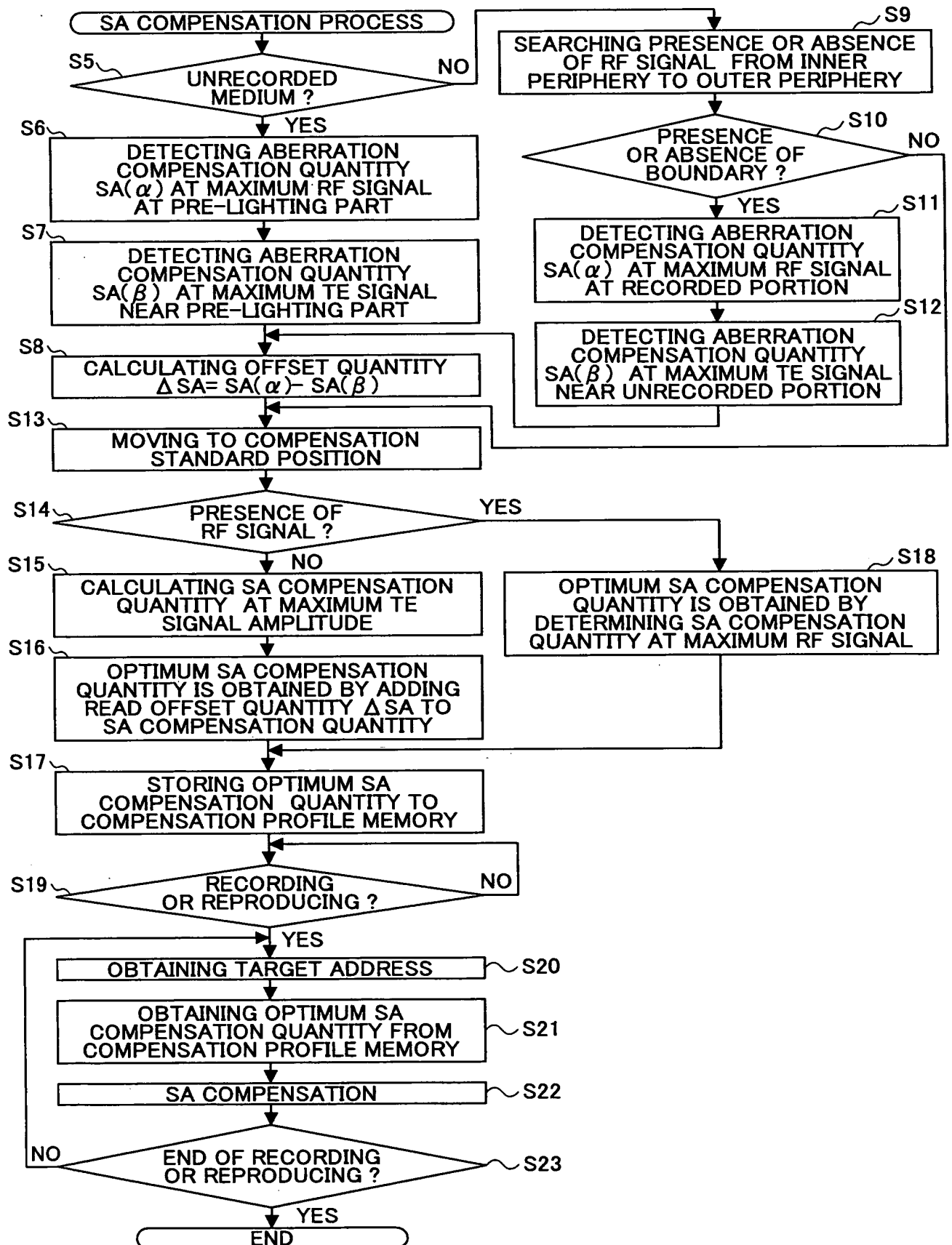


FIG.6



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FIG.7A

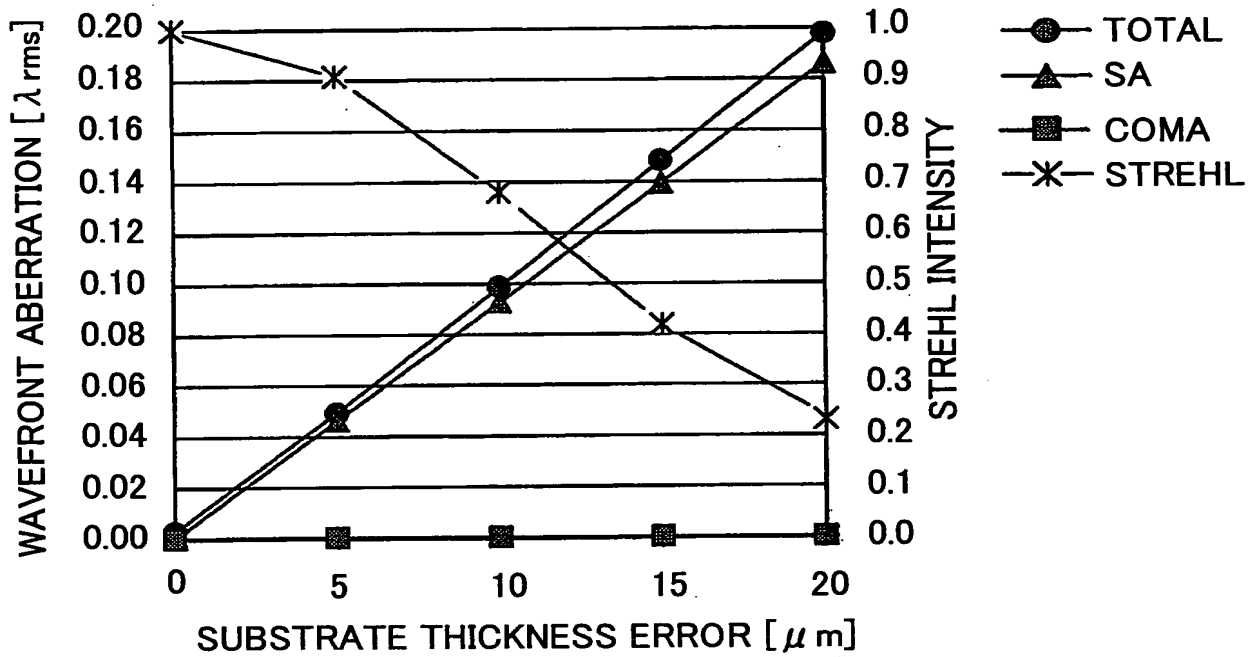


FIG.7B

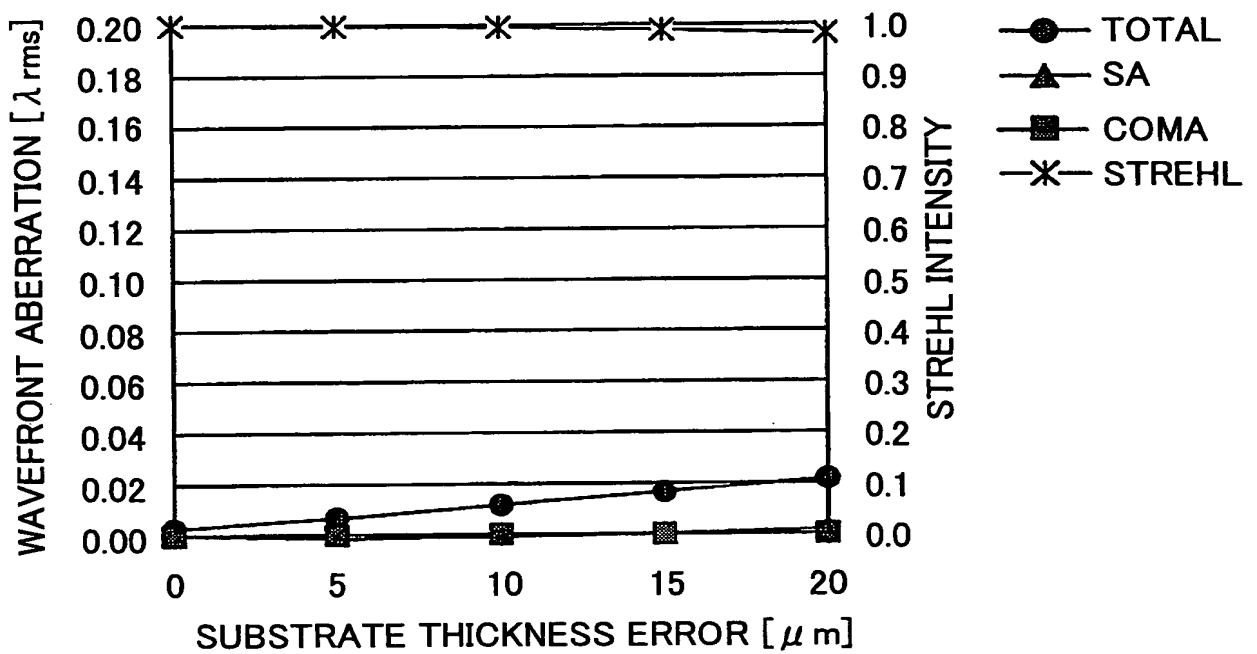


FIG.8A

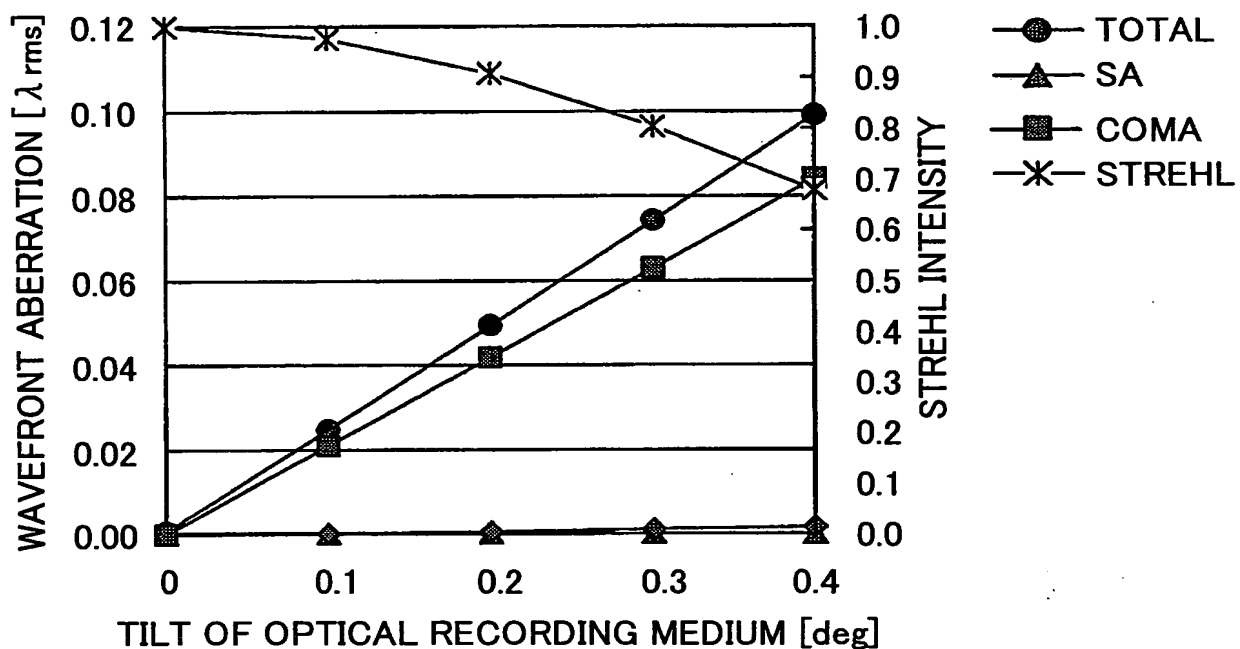
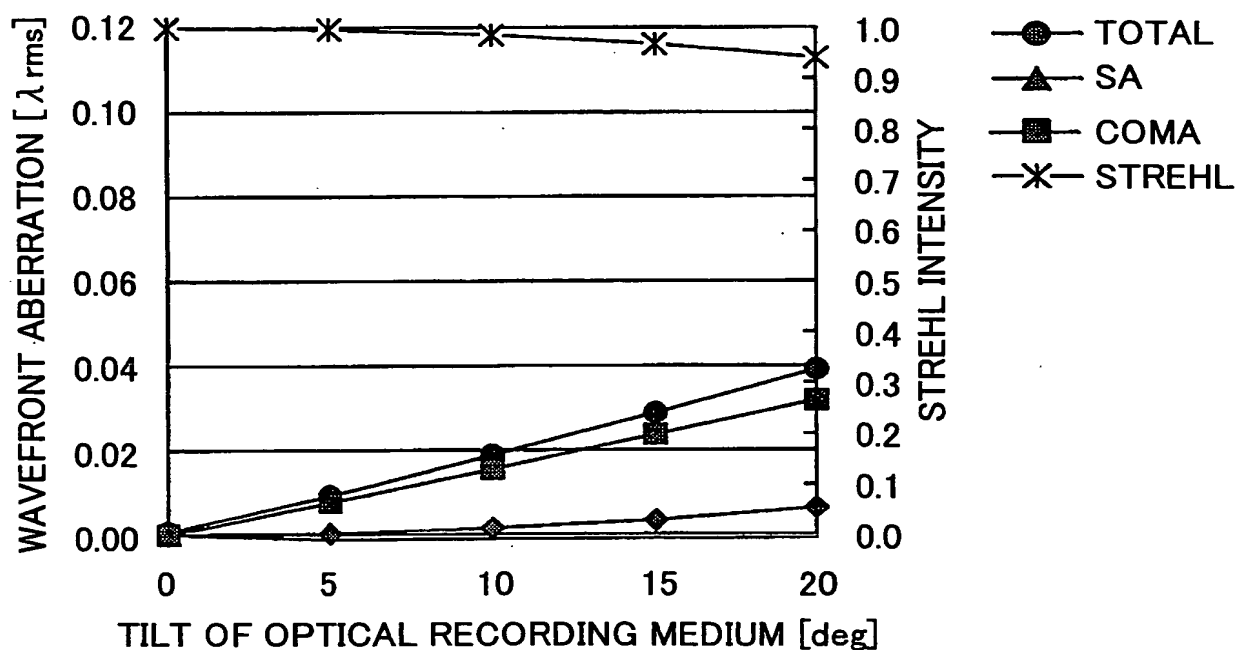


FIG.8B



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FIG.9A

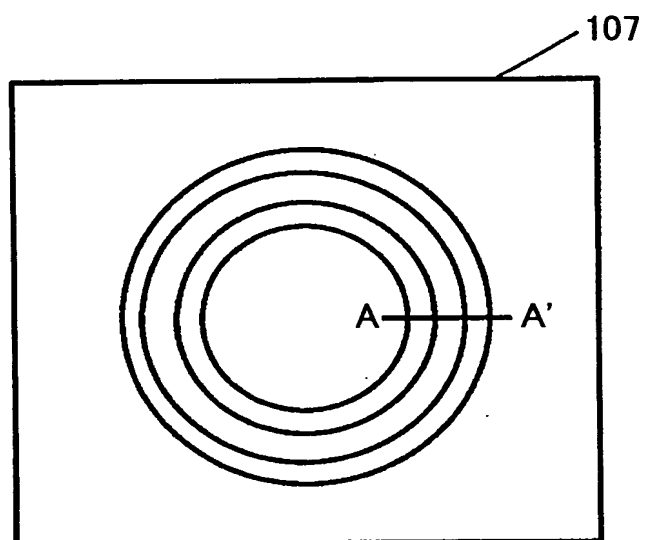


FIG.9B



FIG.9C

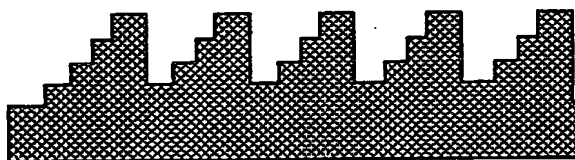


FIG.10A

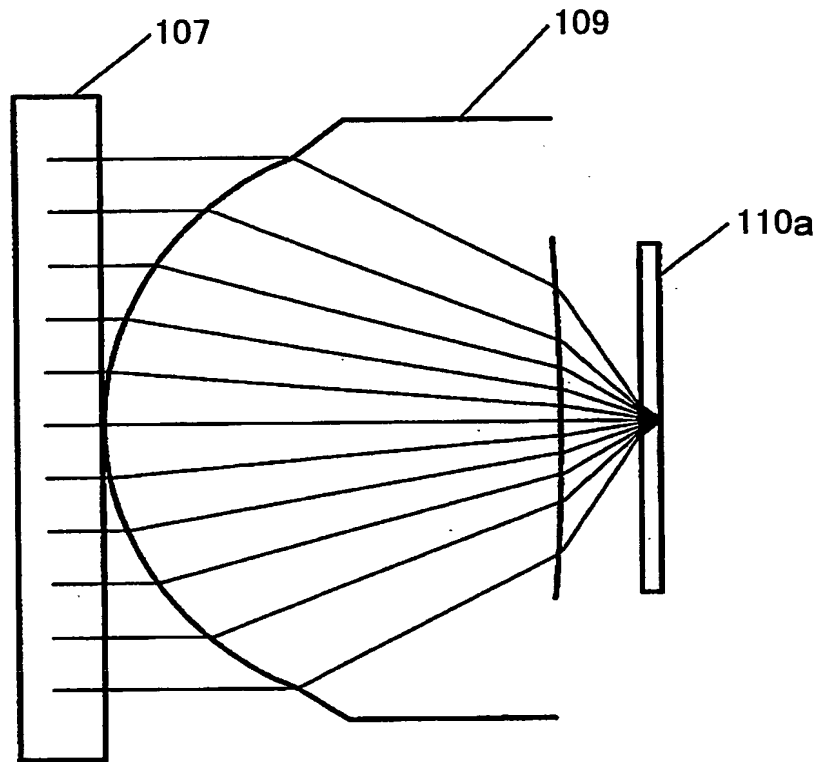
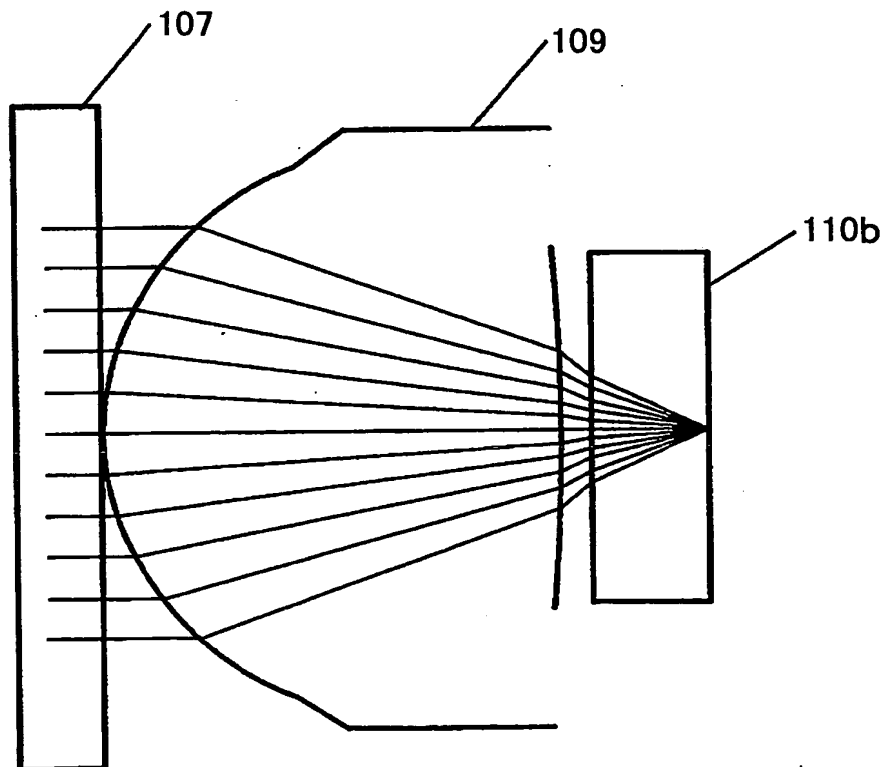


FIG.10B



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FIG.11

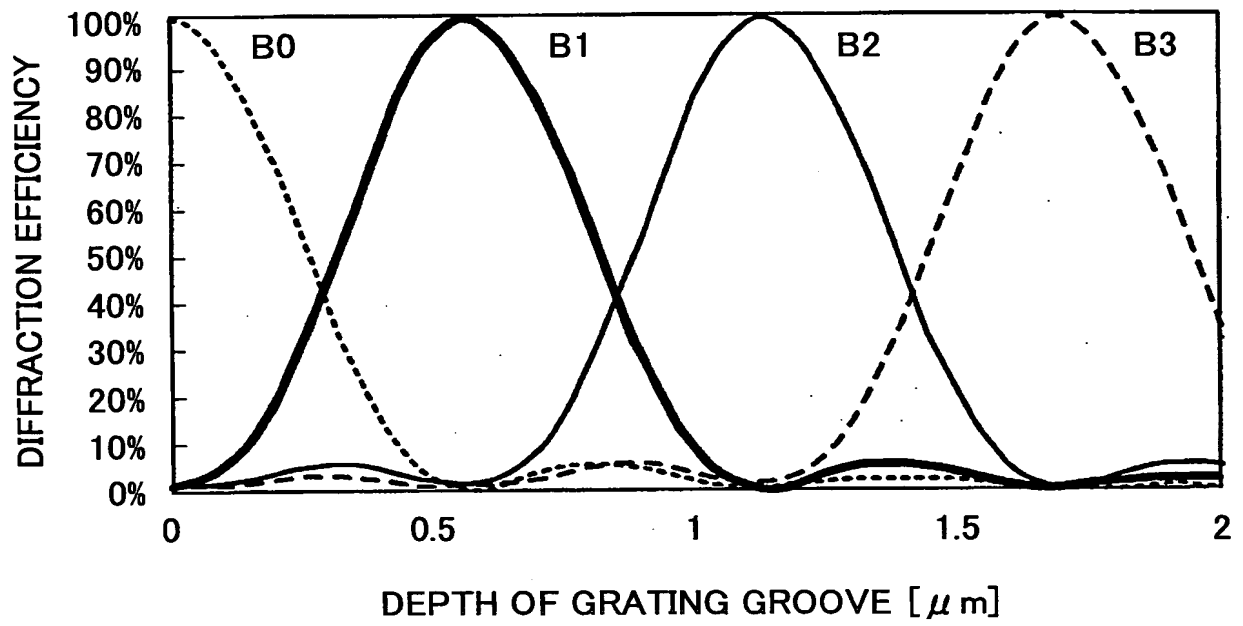


FIG.12A

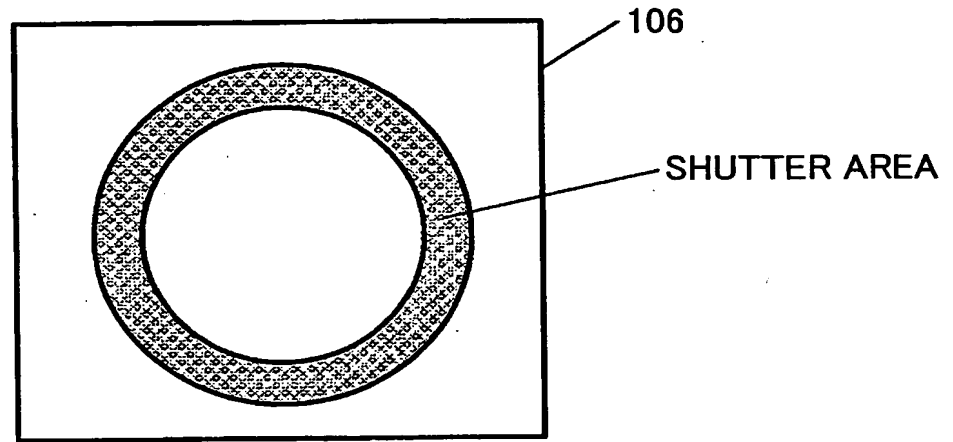
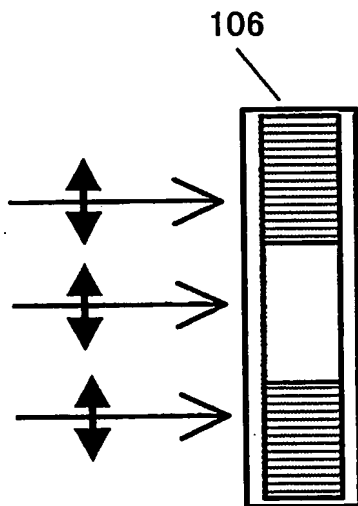
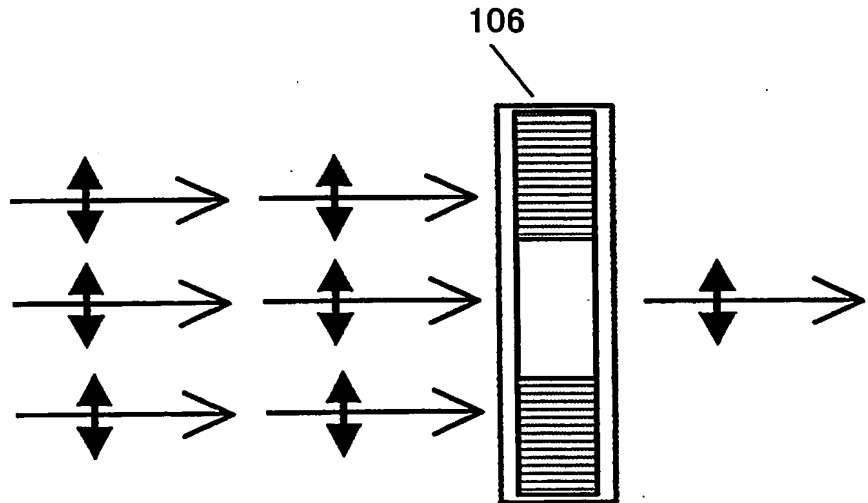


FIG.12B



LIQUID CRYSTAL: OFF

FIG.12C



LIQUID CRYSTAL: ON

FIG.13A

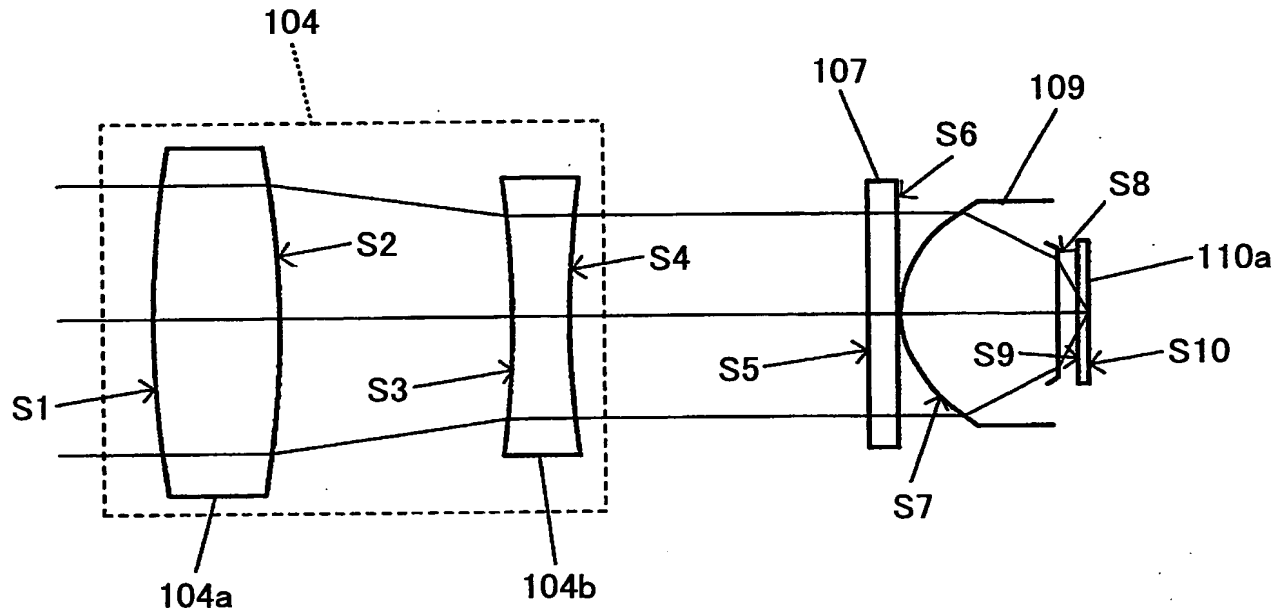


FIG.13B

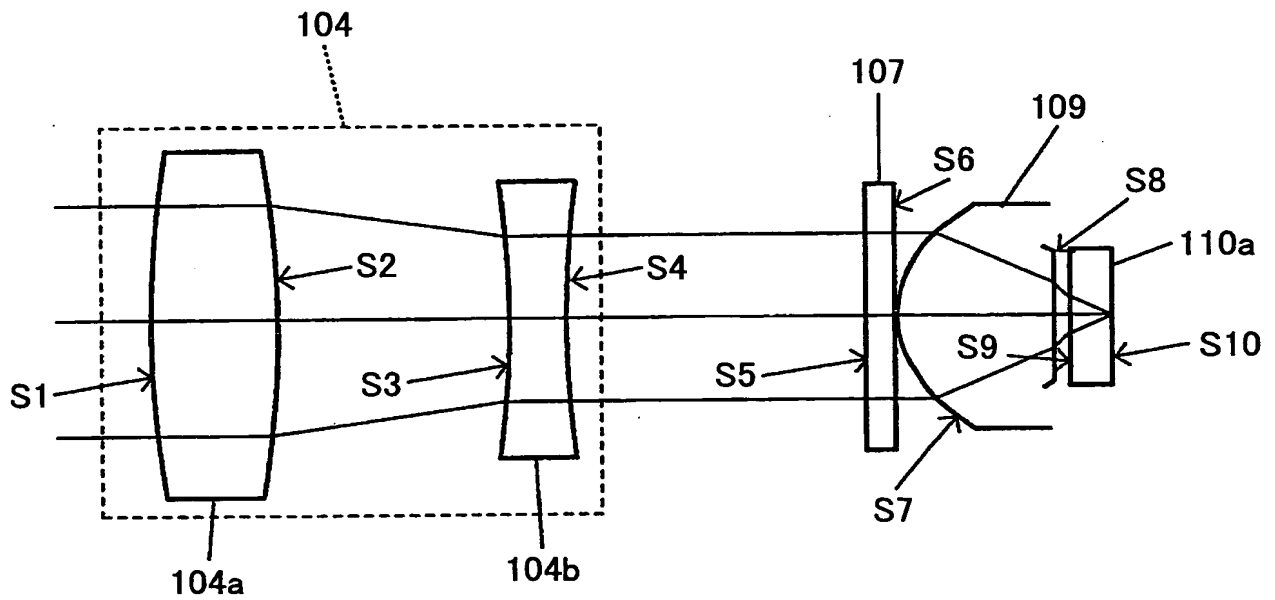


FIG.14

SURFACE	RDY (RADIUS OF CURVATURE)	THI (THICKNESS)	n(REFRACTIVE INDEX):405nm
OBJ	INFINITY	INFINITY	
S1	15.52	2.00	1.53
S2	-24.01	3.55	
S3	-15.67	1.00	1.80
S4	37.12	5.00	
S5 (STO)	INFINITY	0.6	1.72
S6	INFINITY	0.0	
	DIFFRACTION ORDER 0TH ORDER / 1ST ORDER (NOTE 1) DIFFRACTION SURFACE COEFFICIENTS C1: 8.0361×10^{-3} C2: -8.8252×10^{-4} C3 : -1.0901×10^{-03} C4: -6.8601×10^{-5} C5: -3.8433×10^{-6}		
S7	1.38	2.38	1.72
	ASPHERIC COEFFICIENTS OF LENS SURFACE K: -0.671973 A: 0.108576×10^{-1} B: 0.887024×10^{-3} C : 0.615641×10^{-3} D: 0.305477×10^{-3} E: -0.235521×10^{-3} F : 0.954484×10^{-5} G: 0.403964×10^{-4} H: 0.599180×10^{-5} J : -0.871198×10^{-5}		
S8	-4.24	-0.43/0.15 (NOTE 1)	
	ASPHERIC COEFFICIENTS OF LENS SURFACE K: 15.973519 A: 0.265234 B: -0.165180 C : -0.762341×10^{-1} D: 0.119223 E: 0.102416×10^{-1} F : -0.146044×10^{-2} G: -0.528214×10^{-2} H: -0.300544×10^{-2} J : 0.292188×10^{-2}		
S9	INFINITY	0.1/0.6 (NOTE 1)	1.53
S10	INFINITY	0.0	
EPD: ENTRANCE PUPIL DIAMETER(mm)		3.0/2.3 (NOTE 1)	
WL: WAVELENGTH(nm)		405	

NOTE 1. 『/』 MEANS THE ORDER OF FIRST BLUE-RAY OPTICAL RECORDING MEDIUM /SECOND BLUE-RAY OPTICAL RECORDING MEDIUM.

FIG.15A

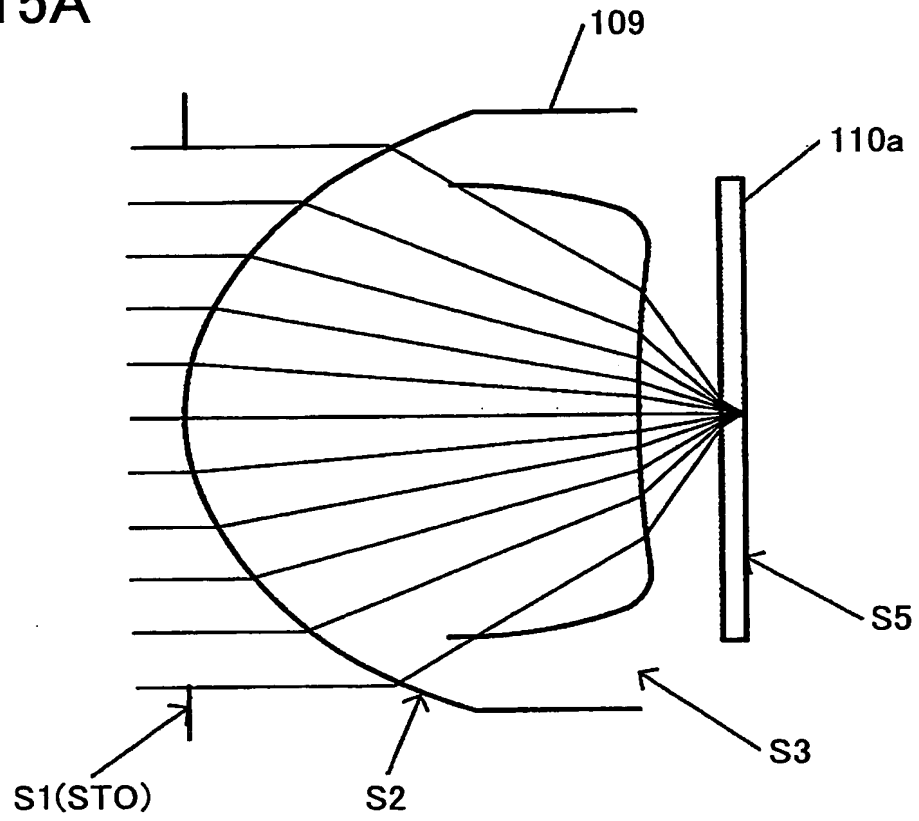


FIG.15B

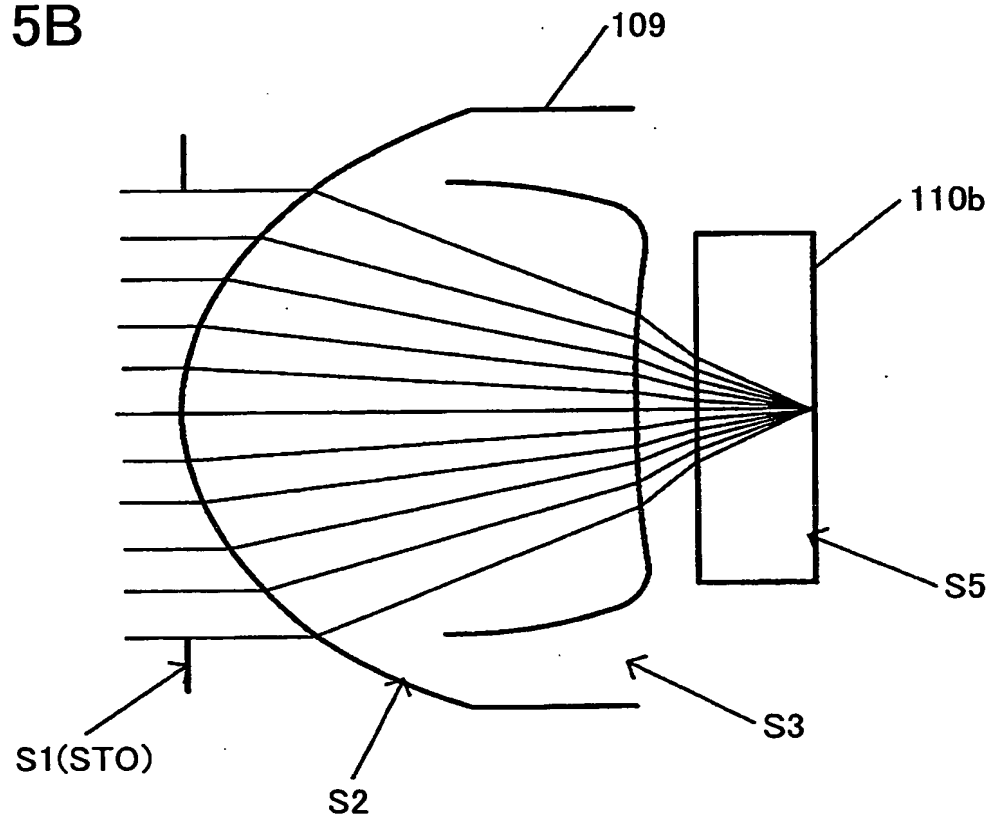


FIG.16

SURFACE	RDY (RADIUS OF CURVATURE)	THI (THICKNESS)	n(REFRACTIVE INDEX):405nm
OBJ	INFINITY	INFINITY	
S1 (STO)	INFINITY	0.6	
S2	1.38	2.38	1.72
	DIFFRACTION ORDER 0TH ORDER / 1ST ORDER (NOTE 1)		
	DIFFRACTION SURFACE COEFFICIENTS C1: 2.7423×10^{-2} C2: 1.0502×10^{-3} C3 : -5.9391×10^{-4} C4: -3.7025×10^{-4} C5: $1.2757(-4)$		
S3	ASPHERIC COEFFICIENTS OF LENS SURFACE K: -6.6426×10^{-1} A: 1.0604×10^{-2} B: 2.1601×10^{-3} C : 6.0889×10^{-5} D: 4.8057×10^{-4} E: -7.7885×10^{-5} F : 4.7808×10^{-5}		
	-4.80	-0.43/0.29 (NOTE 1)	
	ASPHERIC COEFFICIENTS OF LENS SURFACE K:12.516971 A:0.279855 B:-.141274 C : $-.250439 \times 10^{-1}$ D:0.108911 E:-.801930 $\times 10^{-1}$ F : $-.146045 \times 10^{-2}$ G:-.528214 $\times 10^{-2}$ H:-.300544 $\times 10^{-2}$ J : 0.292188×10^{-2}		
S4	INFINITY	0.1/0.6 (NOTE 1)	1.53
S5	INFINITY	0.0	
EPD:ENTRANCE PUPIL DIAMETER(mm)		3.0/2.3 (NOTE 1)	
WL:WAVELENGTH(nm)		405	

NOTE 1. 『/』 MEANS THE ORDER OF FIRST BLUE-RAY OPTICAL RECORDING MEDIUM /SECOND BLUE-RAY OPTICAL RECORDING MEDIUM.

FIG.17

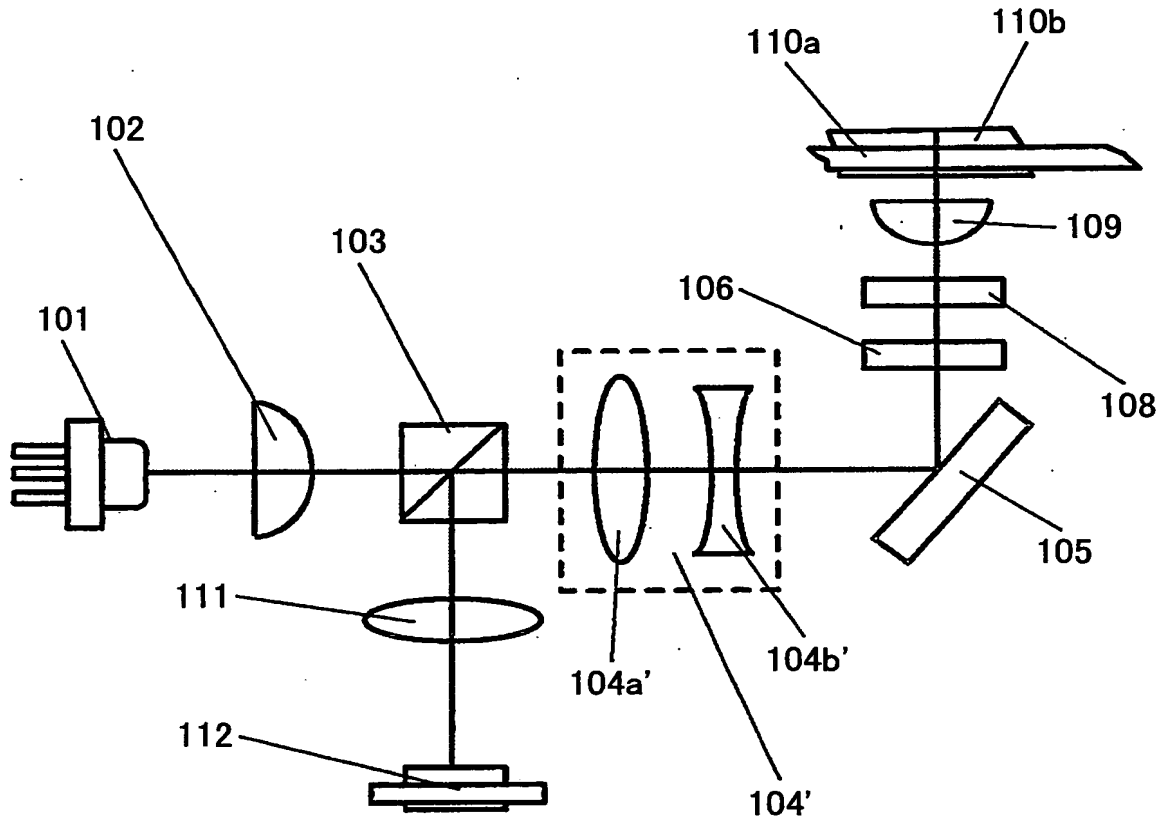


FIG.18

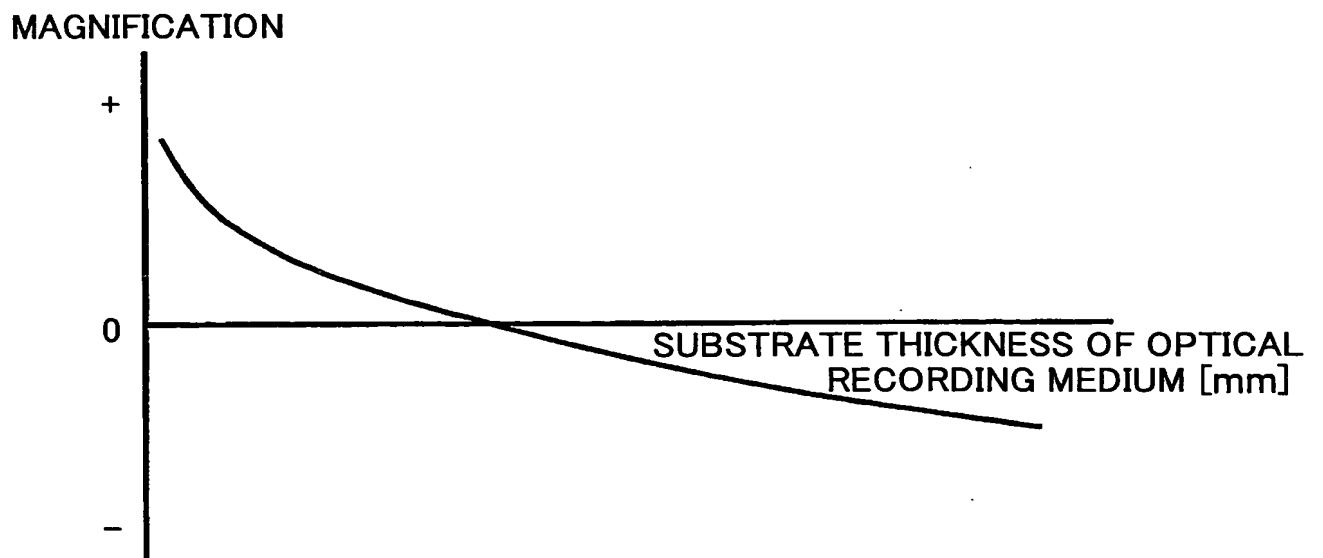


FIG.19A

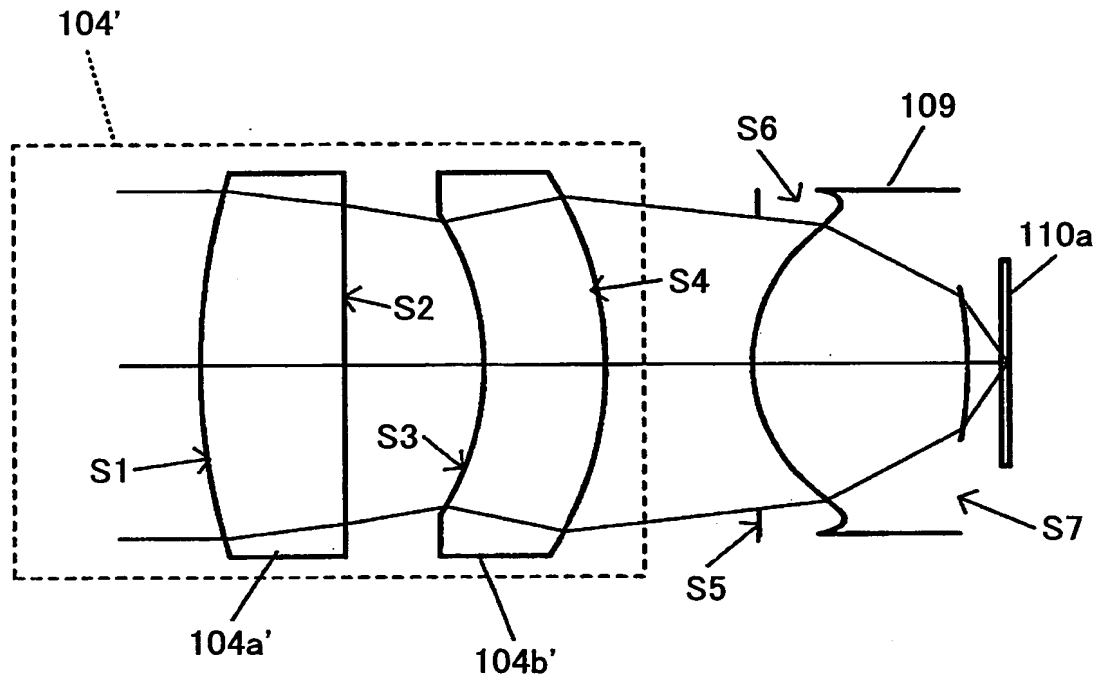


FIG.19B

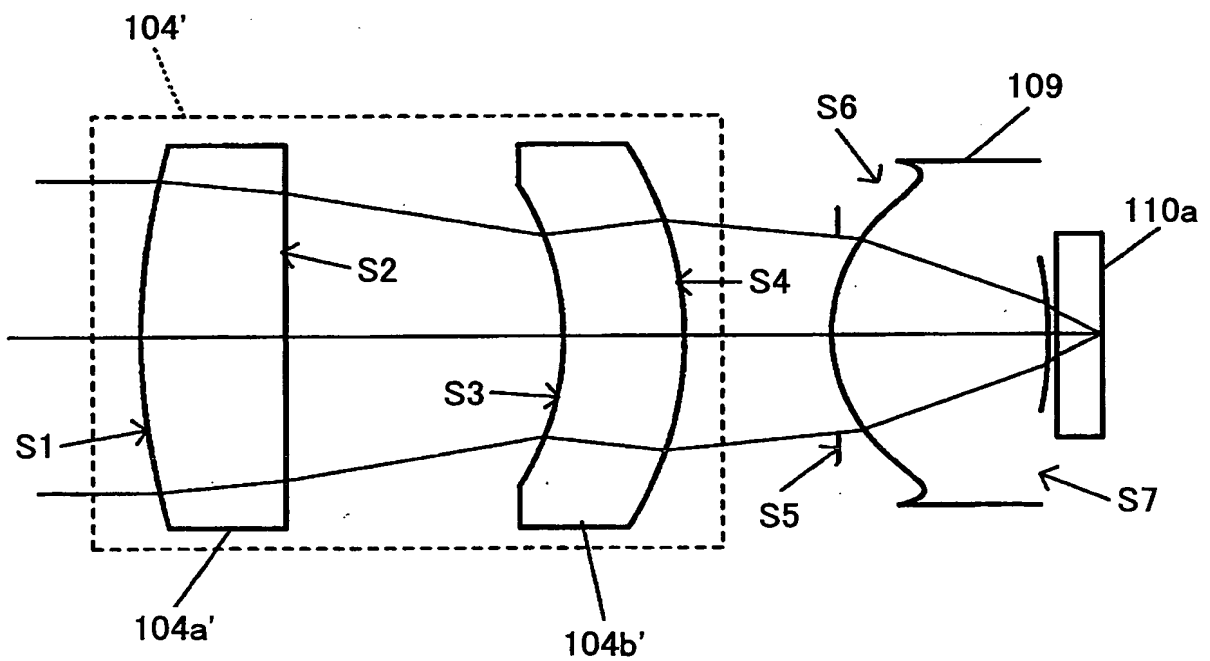


FIG.20

SURFACE	RDY (RADIUS OF CURVATURE)	THI (THICKNESS)	n(REFRACTIVE INDEX):405nm
OBJ	INFINITY	INFINITY	
S1	7.56	2.0	1.53
	ASPHERIC COEFFICIENTS OF LENS SURFACE K:0.972983 A: 0.371207×10^{-3} B: -0.478667×10^{-4} C : -0.901945×10^{-5} D: -0.814374×10^{-6}		
S2	40.91	2/4.1 (NOTE 1)	
	ASPHERIC COEFFICIENTS OF LENS SURFACE K:-76.180141 A: -0.551113×10^{-3} B: -0.604159×10^{-4} C : -0.264014×10^{-4} D: 0.307055×10^{-7}		
S3	-3.54	1.7	1.80
	ASPHERIC COEFFICIENTS OF LENS SURFACE K:-0.031141 A: 0.286777×10^{-3} B: -0.248176×10^{-3} C : -0.146269×10^{-4} D: -0.160400×10^{-4}		
S4	-4.35	0.0	
	ASPHERIC COEFFICIENTS OF LENS SURFACE K:-0.751196 A: -0.557062×10^{-4} B: -0.818406×10^{-4} C : -0.451735×10^{-4} D: 0.195625×10^{-5}		
S5 (STO)	INFINITY	0.6	1.72
S6	1.90	2.90	1.72
	ASPHERIC COEFFICIENTS OF LENS SURFACE K:-0.638807 A: 0.515357×10^{-2} B: 0.536542×10^{-3} C : 0.155822×10^{-4} D: 0.693345×10^{-5} E: -0.144620×10^{-4} F : -0.464699×10^{-7} G: 0.607353×10^{-6} H: 0.816724×10^{-7} J : -0.863344×10^{-7}		
S7	-5.49	0.51/0.12 (NOTE 1)	
	ASPHERIC COEFFICIENTS OF LENS SURFACE K:27.747443 A:0.181893 B: -0.209173 C : 0.152146 D: -0.292109×10^{-1} E: 0.432555×10^{-3} F : -0.346960×10^{-4} G: -0.705877×10^{-4} H: -0.225917×10^{-4} J : 0.123545×10^{-4}		
S8	INFINITY	0.1/0.6 (NOTE 1)	1.53
S9	INFINITY	0.0	
EPD:ENTRANCE PUPIL DIAMETER (mm)		3.8/2.3 (NOTE 1)	
WL:WAVELENGTH (nm)		405	

NOTE 1. [/] MEANS THE ORDER OF FIRST BLUE-RAY OPTICAL RECORDING MEDIUM /SECOND BLUE-RAY OPTICAL RECORDING MEDIUM.

FIG.21

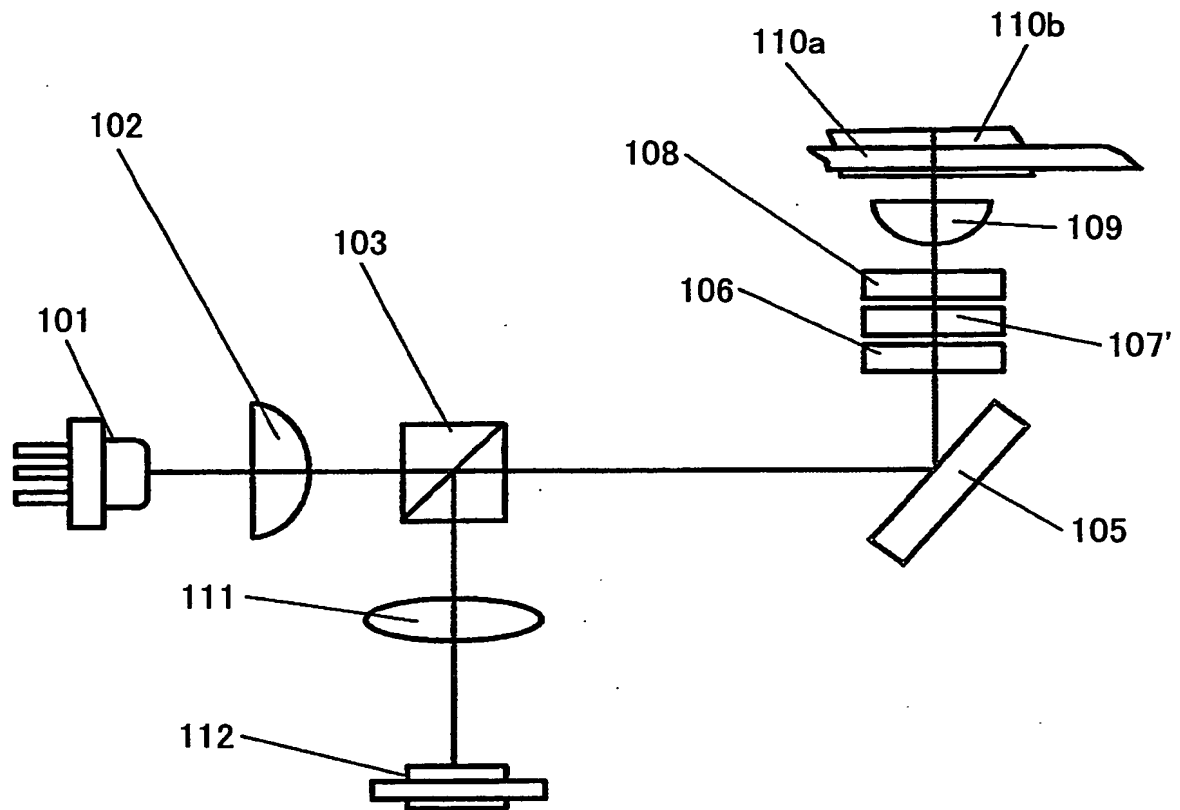
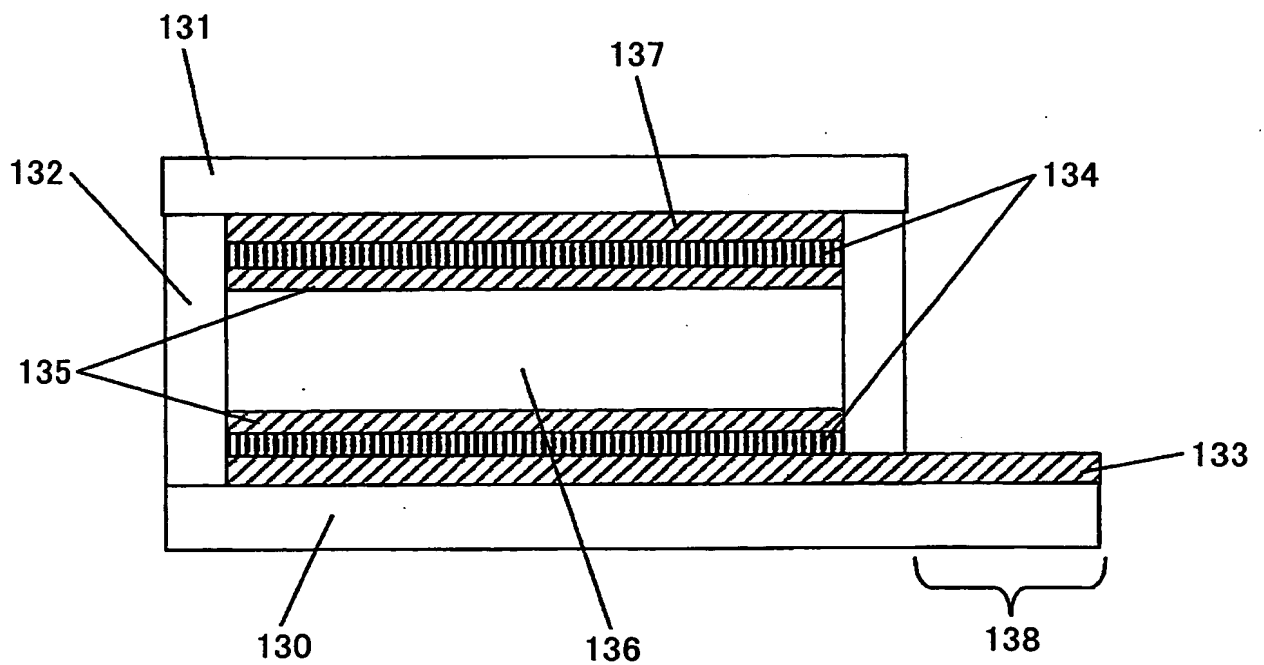


FIG.22



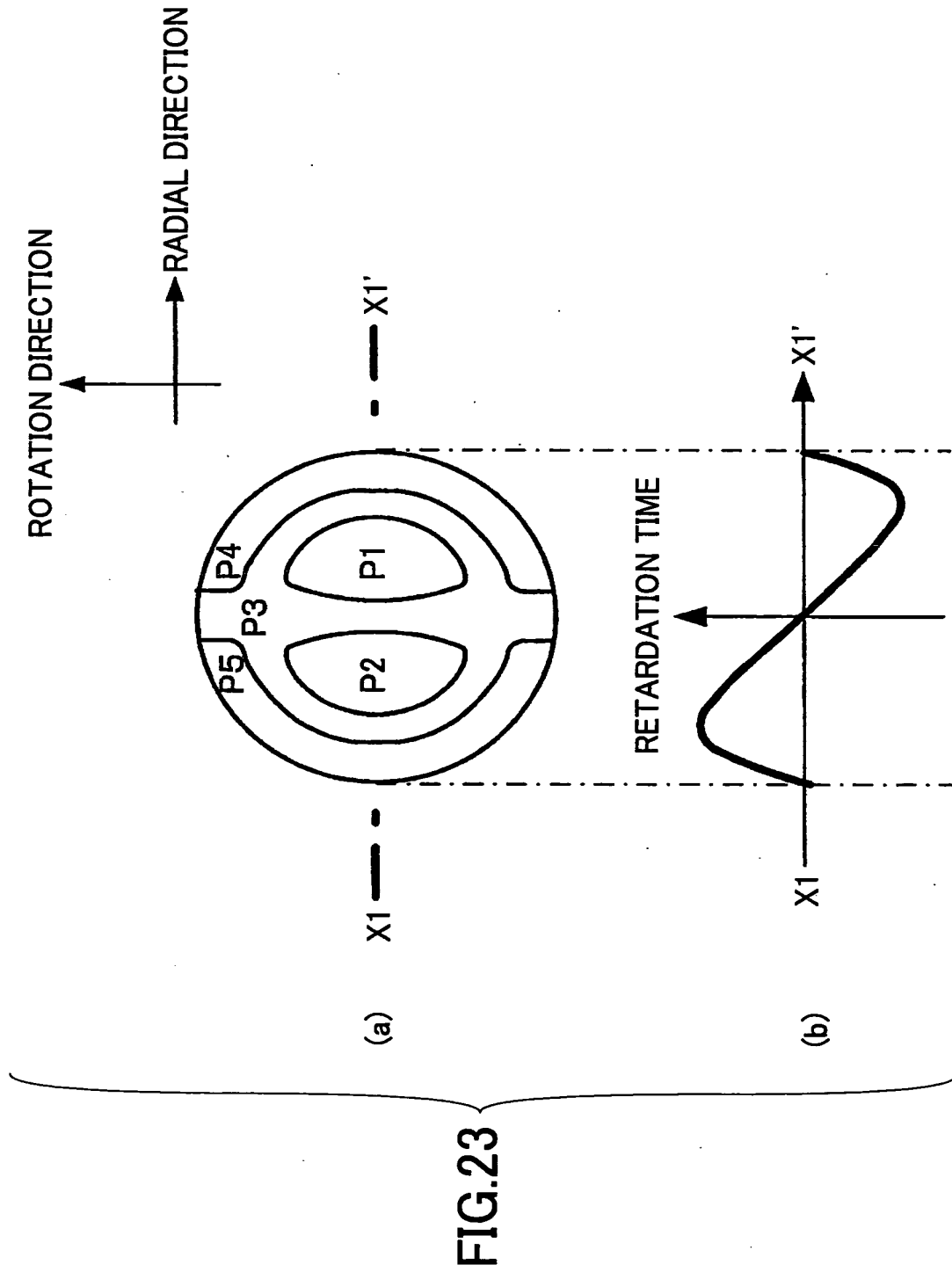
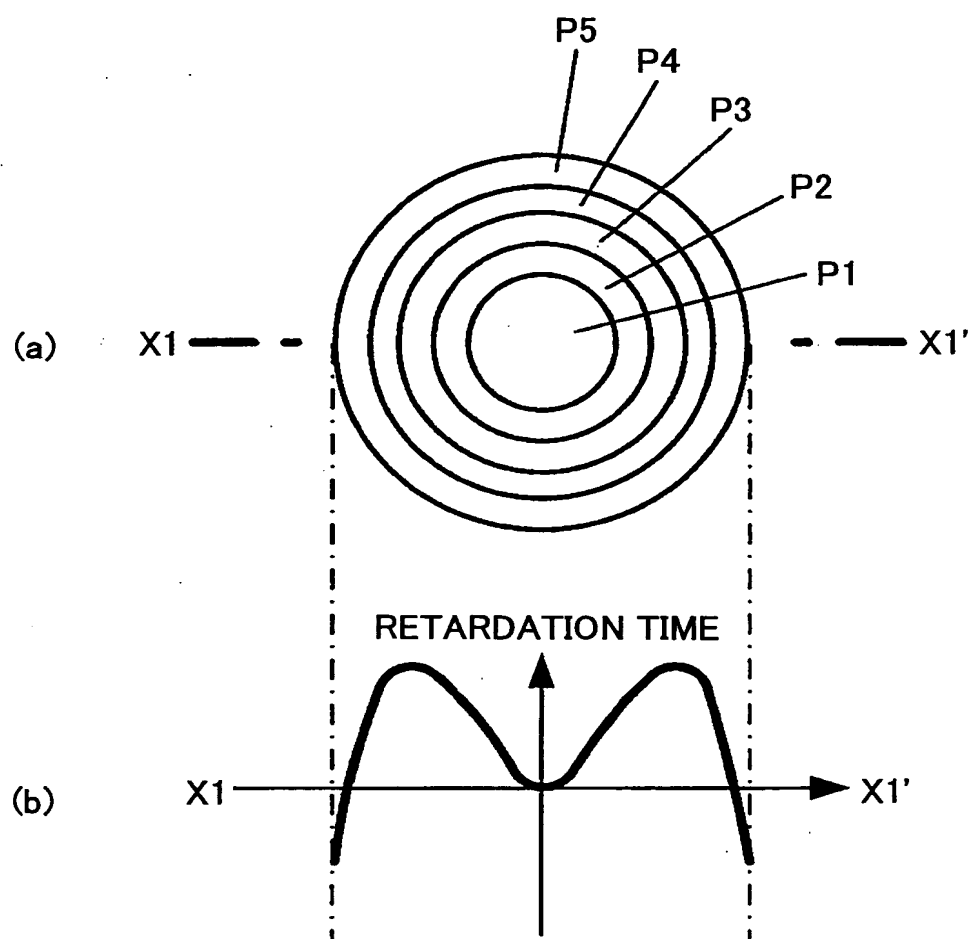


FIG.24



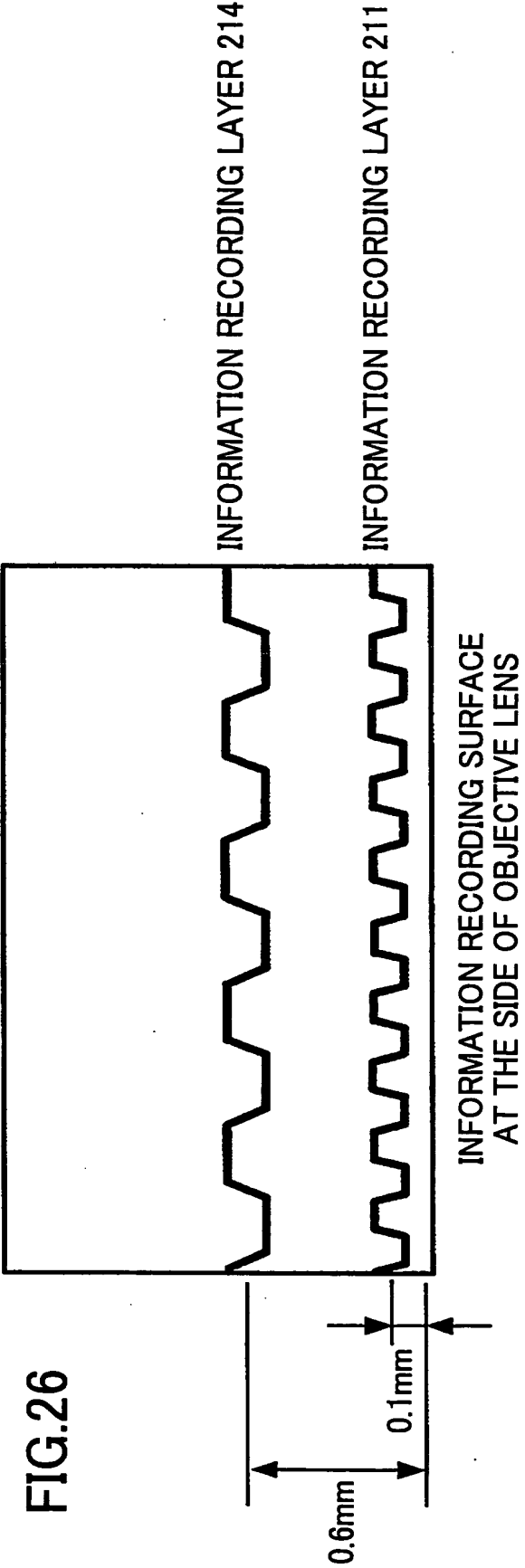
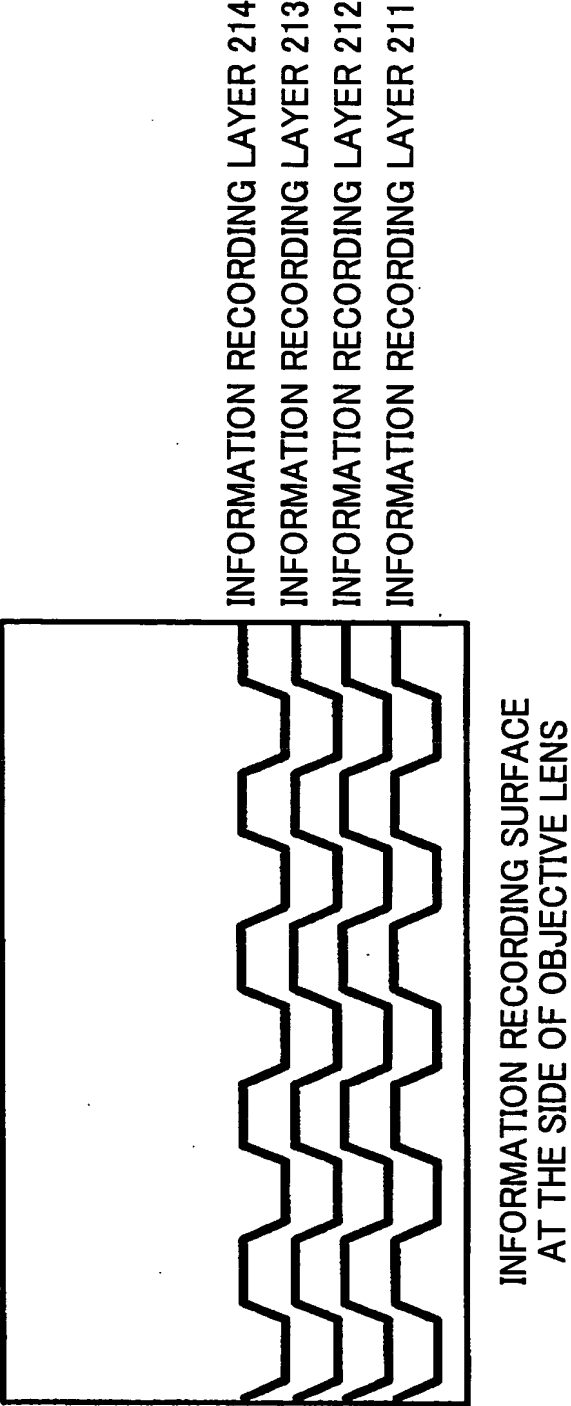


FIG.27

